

**REMARKS**

**I. Rejection under 35 USC § 112, 2nd paragraph**

The Examiner rejects claims 8, 10, 59, 61, 65-67, 70, 71, 75 and 78-89 for reciting the expression “defined by”. Applicant has amended claims 8, 10, 61, 70, 75, 79, 80, 82, 85, 86, and 87 to replace “defined by” with “as shown in” (consistent with claim 1) or with “set forth as”.

The Examiner rejects claim 88 for improper claim dependency. The claim has been corrected to depend on claim 87.

Applicant submits that the claims comply with 35 USC § 112, 2nd paragraph.

**II. Rejection under 35 USC § 103(a)**

The Examiner rejects claims 10, 65-67 and 83-89 as being obvious over US patent 6,943,241 ('Isogai') in view of US publication 2001/0016651 ('Kennedy'). Applicant traverses.

According to the Examiner, Isogai discloses a protein that is identical to amino acids 160-406 of SEQ ID NO: 2 (human Pygopus 2). The region of identity encompasses amino acids 89-328 as recited in the claims. Isogai also discloses antibodies at column 38, lines 30-57. However, Isogai does not teach antibodies in a kit. Kennedy provides this missing element, so that Isogai in combination with Kennedy renders the kit claims obvious.

The Isogai patent discloses 4096 sequences. Isogai's SEQ ID NO: 1998 is the sequence referred to by the Examiner.

Claims 10 and 87, and claims dependent thereon, recite an antibody or fragment thereof that binds specifically to hPygo2 protein in the region set forth as amino acids 89-328 of SEQ ID NO:2. In the previous response, we explained that antibodies to this region are expected to be specific to hPygo2 because this region of hPygo2 excludes the domains NHD and PHD, which are conserved domains (see page 4 lines 1-8 of the specification). In contrast, Isogai's SEQ ID NO: 1998 includes the entire PHD domain (which extends from

amino acids 329 to 385 of SEQ ID NO: 2; see Figure 1 of the specification). Accordingly, Isogai's antibodies would not be expected to bind specifically to hPygo2 as required by the claims. The Kennedy reference does not remedy this omission. The claims are therefore unobvious because not all elements of the claims are disclosed or suggested by the prior art.

Applicant submits that the claims comply with 35 USC § 103(a).

### III. Final Remarks

Consideration and favourable action on all pending claims are respectfully requested. If any questions or issues remain, the Examiner is invited to contact the undersigned at the telephone number set forth below so that a prompt disposition of this application can be achieved.

If there are any fees due in connection with the filing of this Amendment, please charge the fees to our Deposit Account Number 19-2550.

In view of the foregoing, early favourable consideration of this application is earnestly solicited.

Respectfully submitted,  
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